

ABSTRACT

The current study was designed to standardize and validate the method of analysis in determining the active compounds of ethanol 70 % mixture extract of sambiloto herbs (*Andrographis paniculata* Nees.) and mahogany seeds (*Swietenia mahagoni* Jacq.) (2:1), to see the improvement of physical quality parameters of extract with the addition of additives (avicel PH 101, corn starch, lactose, and cab-o-sil), and to determine the increase of andrographolide solubility with the addition of poloxamer 188. The determination of active compounds, validation methods, and solubility test were performed by the TLC (Thin Layer Chromatography)-densitometric method analysis and for andrographolide solubility test was performed by using a magnetic stirrer on the hot plate with a speed of 1000 rpm for \pm 36 hours at room temperature then fractionated using ethyl acetate. The results showed mixture extract had been standardized both in specific and non specific parameters of extracts, meet the validation requirements of methods which include specificity, LOD/LOQ, linearity, accuracy, and precision. There was an increase of flow characteristic from physical mixture of mixed extract with combination of additives with a velocity value of 10.23 gram/sec, a decrease in the value of the stationary angle of 44.46°, and an increase in MC (Moisture Content) value of 3.6 %. From paired samples t-test statistical analysis results, the addition of poloxamer 188 was proven to be able to increase the andrographolide solubility in water and phosphate buffer pH 7.4 and the andrographolide solubility in phosphate buffer pH 7.4 was higher than in water.

Keywords : *Andrographis paniculata* Nees., *Swietenia mahagoni* Jacq., standardization, validation, poloxamer 188.